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January 1953 to December 1969

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Abstract

This bibliography consolidates into a single publication National Bureau of Standards Monograph 27 (January 1953 to June 1960) and its two supplements (September 13, 1963 and April 28, 1967, respectively) together with 1800 new references covering essentially the period from January 1966 to December 1969, but including some earlier citations previously omitted. The consolidated publication, which supersedes the earlier bibliographies, thus covers literature of temperature measurement published between January 1953 and December 1969.

In general, the arrangement of material in this new edition is the same as in Monograph 27, and the journal abbreviations are those employed in Chemical Abstracts. However, starting with 1963, and in the new material, scope of coverage in Part 1 was broadened to include theory, calibration, and temperature scales in addition to the previous categories of thermoelectric theory and calibration.

Key words: Fluidic thermometers; pyrometry; radiation pyrometry; temperature measurement; thermistors; thermocouple; thermometry.

Bibliography of Temperature Measurement

January 1953 to June 1960

Carl Halpern and Robert J. Moffat*

There are presented more than 500 references to the field of temperature measurement. These references were collected from two general sources: Scientific and technical literature and government reports. The period covered is from 1953 to June 1960, with some from earlier dates. For convenience of the user, the references are divided into a number of categories based on the type of instrument used. Some references to calibration of instruments and to scientific theories, on which temperature measurement is based, are also presented.

Introduction

The original version of this bibliography was compiled in 1957 by Robert J. Moffat of the Research Laboratories, General Motors Corporation, for the AE–2 Committee, Physical Measurement Sensing, of the Society of Automotive Engineers. Later, a Bibliography Subcommittee was formed to keep abreast of the current literature, and supplements have been compiled by Carl Halpern of the National Bureau of Standards. George E. Glawe of the Lewis Research Center, National Aeronautics and Space Administration; and John W. Fulton, Wright Air Development Division, U.S. Air Force, have also assisted in furnishing references. Because of the favorable response to and the continued demand for copies of the bibliography and its supplements, it was decided to issue it in a more permanent form for wider circulation.

The material contained herein was collected from two general sources: Scientific and technical journals, and reports of investigations sponsored or conducted by various governmental agencies. These latter are mostly distinguished as ASTIA or PB reports. ASTIA reports may be obtained from the Armed Services Technical Information Agency, Arlington Hall Station, Arlington 12, Va. PB reports designated as OTS may be obtained from Office of Technical Services, U.S. Department of Commerce, Washington 25, D.C.; those designated as LC may be obtained from the Library of Congress, Washington 25, D.C. Some agencies such as the National Advisory Committee for Aeronautics and its successor the National Aeronautical and Space Administration, Washington 25, D.C., issue their own reports.

The topical subdivisions are shown in the table of contents. Each subdivision is arranged chronologically and within the chronological sections, alphabetically by author. "Anonymous" articles appear at the end of each section. The period covered is from January 1953 to June 1960 with some earlier entries.

The journal abbreviations used are those employed in Chemical Abstracts. Volume numbers are in bold-faced type and the date of issue is given where page numbers do not run consecutively throughout a given volume. Since the year of issue appears at the head of each chronological section, this is not repeated in the individual references unless publication was in more than one year. References made to unpublished papers presented before various societies are designated by the abbreviation M.P.

*Research Laboratories, General Motors Corporation, Warren, Mich.

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Bibliography of Temperature Measurement

July 1960 to December 1962

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There are presented in this supplement to NBS Monograph 27, "Bibliography of Temperature Measurement, January 1953 to June 1960" issued April 6, 1961, about 700 additional references to the field of temperature measurement. The period covered is from July 1960 to December 1962 with some earlier references which came to our attention. The arrangement of material is the same as in Monograph 27, and the journal abbreviations used are those employed in Chemical Abstracts.

Introduction

The material contained herein was collected from two general sources: scientific and technical journals and reports of investigations sponsored or conducted by various governmental agencies. English, German, and French journals and translations in English of Russian journals were covered as well as the more commonly used abstract journals. Some references to material in other languages, obtained from the abstract journals, are also included. To obtain references to governmental reports the following were consulted: Technical Abstract Bulletin, Armed Services Technical Information Agency (ASTIA); U.S. Government Research Reports, Office of Technical Information, U.S. Department of Commerce; and Scientific and Technical Aerospace Reports, National Aeronautics and Space Administration (NASA). While reasonably complete coverage was intended, it is inevitable that oversights and other unintentional omissions have occurred.

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January 1963 to December 1965

Lief O. Olsen and Carl Halpern

BIBLIOGRAPHY of TEMPERATURE MEASUREMENT

January 1963 to December 1965

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There are presented in this supplement to NBS Monograph 27, "Bibliography of Temperature Measurement, January 1953 to June 1960" issued April 6, 1961 and Supplement 1, July 1960 to December 1962 issued September 13, 1963, about 1200 additional references to the field of temperature measurement. The period covered is from January 1963 to December 1965 with some earlier references which came to our attention. With the exception of Part 1 which has been changed to include theory; calibration and temperature scales, the arrangement of material is the same as in Monograph 27. The journal abbreviations used are those employed in Chemical Abstracts.

Key words: Temperature, thermometry, thermocouples, thermistors, resistance thermometer, and radiation pyrometry

INTRODUCTION

The material contained herein was collected from two general sources: scientific and technical journals and reports of investigations sponsored or conducted by various governmental agencies. English, German, and French journals and translations in English of Russian journals were covered as well as the more commonly used abstract journals. Some references to material in other languages, obtained from the abstract journals, are also included. To obtain references to governmental reports the following were consulted: Technical abstract Bulletin, Armed Services Technical Information Agency; Scientific and Technical Aerospace Reports, National Aeronautics and Space Administration (NASA); Nuclear Science Abstracts, United States Atomic Energy Commission; and U.S. Government Research Reports, Office of Technical Information, U.S. Department of Commerce. While reasonably complete coverage was intended, it is inevitable that oversights and other unintentional omissions have occurred.

The topical subdivisions are shown in the table of contents. Each subdivision is arranged chronologically and within the chronological sections, alphabetically by author. "Anonymous" articles appear at the end of each section.

The period covered is from January 1963 to December 1965 with some earlier entries which had been overlooked in the original bibliography NBS Monograph 27 and its first supplement.

The journal abbreviations used are those employed in Chemical Abstracts. Volume numbers are underlined and date of issue is given where page numbers do not run consecutively throughout a given volume. Since the year of issue apears at the head of each chronological section, this is not repeated in the individual references.

Numbers prefixed by the letters AD refer to report numbers in the Technical Abstract Bulletin; those by N63, N64, and N65 are identifying numbers in the Scientific and Technical Aerospace Reports; and those by NSA refer to the report numbers in Nuclear Science Abstracts.

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Bibliography of Temperature Measurement

January 1966 to December 1969

Paul D. Freeze and Leslie P. Parker

BIBLIOGRAPHY of TEMPERATURE MEASUREMENT

January 1966 to December 1969

Paul D. Freeze and Leslie P. Parker

Approximately 1800 references to the literature of temperature measurement are presented in this supplement to NBS Monograph 27, Bibliography of Temperature Measurement. The monograph, issued April 6, 1961, covered the period January 1953 to June 1960. Supplement 1, issued September 13, 1963, covered the period July 1960 to December 1962. Supplement 2, issued April 28, 1967, covered the period January 1963 to December 1965. This supplement covers essentially the period from January 1966 to December 1969, but some earlier references omitted from the previous bibliographies have been included. In general, the arrangement of material is the same as in Monograph 27; Part 1 has, however, been changed in the supplement to include theory, calibration, and temperature scales.

Key words: Fluidic thermometers; pyrometry; radiation pyrometry; temperature measurement; thermistors; thermocouple; thermometry

INTRODUCTION

Research and development for the improvement of temperature measurement capabilities are very active as is evidenced by the growth of the literature of the field. Advances in technology and in scientific research bring with them new problems and new requirements that call for new or improved methods for measuring the temperatures that are an important factor, frequently a critical factor, in most physical systems. Research and development efforts are being directed to the development of temperature measuring instruments that are more accurate, more rugged, more versatile, and generally more reliable, to extend measuring capabilities to high and low temperature extremes, to deal with difficult application situations, to improve theoretical understanding of temperature and related phenomena, and to interpret temperature measurement data.

Surveillance of the literature of temperature measurement is maintained by NBS as a necessary support for its many programs in which temperature measurement plays an important role. Since the need of the NBS for this information is shared by the scientific and technological communities, the information gathered in this surveillance is published as a contribution to the advance of measurement capabilities. The usefulness of the bibliography on temperature measurement is witnessed by the continuing demand for Monograph 27 and its supplements and by support for the work voiced by interested organizations such as the AE-2 Subcommittee on Engine Temperature Sensing of the Society of Automotive Engineers.

The references were collected from scientific and technical journals and from government reports of investigations sponsored or conducted by various governmental agencies. English, German, and French journals and English translations of Russian journals were covered as well as the major abstract journals. Some references to material in languages other than English, obtained from the abstract journals, are included. To obtain references to government reports the following were consulted: Technical Abstract Bulletin and the computerized bibliographic facility of the Defense Documentation Center (formerly Armed Services Technical Information Agency); Scientific and Technical Aerospace Reports, National Aeronautics and Space Administration (NASA); Nuclear Science Abstracts, United States Atomic Energy Commission; and U. S. Government Research Reports, National Technical Information Service, U. S. Department of Commerce. While reasonably complete coverage was intended, it is inevitable that oversights and other unintentional omissions have occurred.

The topical subdivisions are shown in the table of contents. Within each subdivision material is arranged chronologically in sections by year of issue. Within these chronological sections, references are arranged alphabetically by author. "Anonymous" articles appear at the end of each section.

The period covered is from January 1966 to December 1969, but some earlier entries that had been overlooked in NBS Monograph 27 - Supplement 2 have been included.

The journal abbreviations used are those employed in Chemical Abstracts, 1961 through 1967. Volume numbers are underlined and date of issue is given where page numbers do not run consecutively throughout a given volume. Since the year of issue appears at the head of each chronological section, this is not repeated in the individual references.

Numbers prefixed by the letters AD refer to report numbers in the Technical Abstract Bulletin; those by N66, N67, N68, and N69 are identifying numbers in the Scientific and Technical Aerospace Re-

ports, and those by NSA refer to the report numbers in the Nuclear Science Abstracts. Those numbers prefixed by the letter A refer to publications abstracted in International Aerospace Abstracts. The complete report can be obtained from the Technical Information Service, American Institute of Aeronautics and Astronautics, Inc., 750 Third Ave.; New York, N.Y., 20017. Other publications not so cataloged can often be obtained from the Clearing House for Federal Scientific and Technical Information (Referenced CFSTI), now known as (National Technical Information Service, 5285 Port Royal Road, Springfield, Va., 22151.

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15. SUPPLEMENTARY NOTES

16. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.)

This bibliography consolidates into a single publication National Bureau of Standards Monograph 27 (January 1953 to June 1960) and its two supplements (September 13, 1963 and April 28, 1967, respectively) together with 1800 new references covering essentially the period from January 1966 to December 1969, but including some earlier citations previously omitted. The consolidated publication, which supersedes the earlier bibliographies, thus covers literature of temperature measurement published between January 1953 and December 1969.

In general, the arrangement of material in this new edition is the same as in Monograph 27, and the journal abbreviations are those employed in Chemical Abstracts. However, starting with 1963, and in the new material, scope of coverage in Part 1 was broadened to include theory, calibration, and temperature scales in addition to the previous categories of thermoelectric theory and calibration.

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